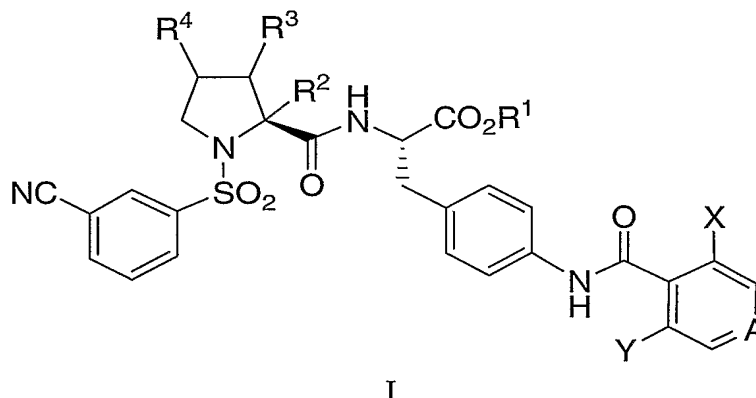


WHAT IS CLAIMED IS:

1. A compound of formula I:



or a pharmaceutically acceptable salt thereof, wherein:

A is N or N<sup>+</sup>-O<sup>-</sup>;

X and Y are independently selected from halogen, C<sub>1-3</sub>alkyl, and C<sub>1-3</sub>alkoxy;

- 10 R<sup>1</sup> is selected from (1) hydrogen, (2) C<sub>1-10</sub>alkyl, (3) -(C<sub>1-10</sub>alkyl)-aryl, (4) -(C<sub>1-10</sub>alkyl)-O-C<sub>1-10</sub>alkyl, (5) -(C<sub>1-10</sub>alkyl)-OC(O)-C<sub>1-10</sub>alkyl, (6) -(C<sub>1-10</sub>alkyl)-OC(O)-aryl, (7) -(C<sub>1-10</sub>alkyl)-OC(O)-C<sub>1-10</sub>alkyl and (8) -(C<sub>1-10</sub>alkyl)N<sup>+</sup>(C<sub>1-3</sub>alkyl)<sub>3</sub>; wherein alkyl is optionally substituted with one to three substituents independently selected from R<sup>a</sup>, and aryl is optionally substituted with one to three substituents independently selected from R<sup>b</sup>;

- 15 R<sup>2</sup> is hydrogen or methyl;

R<sup>3</sup> and R<sup>4</sup> are independently selected from (1) hydrogen, (2) -NR<sup>d</sup>Re, (3) -NR<sup>d</sup>S(O)<sub>m</sub>Re, (4) -NR<sup>d</sup>C(O)Re, (5) -NR<sup>d</sup>C(O)ORE, and (6) -NR<sup>d</sup>C(O)NR<sup>d</sup>Re, with the proviso that R<sup>3</sup> and R<sup>4</sup> are not both hydrogen;

- 20 R<sup>a</sup> is selected from (1) -OR<sup>d</sup>, (2) -NR<sup>d</sup>S(O)<sub>m</sub>Re, (3) -NO<sub>2</sub>, (4) halogen, (5) -S(O)<sub>m</sub>R<sup>d</sup>, (6) -SR<sup>d</sup>, (7) -S(O)<sub>2</sub>OR<sup>d</sup>, (8) -S(O)<sub>m</sub>NR<sup>d</sup>Re, (9) -NR<sup>d</sup>Re, (10) -O(CR<sup>f</sup>R<sup>g</sup>)<sub>n</sub>NR<sup>d</sup>Re, (11) -C(O)R<sup>d</sup>, (12) -CO<sub>2</sub>R<sup>d</sup>, (13) -CO<sub>2</sub>(CR<sup>f</sup>R<sup>g</sup>)<sub>n</sub>CONR<sup>d</sup>Re, (14) -OC(O)R<sup>d</sup>, (15) -CN, (16) -C(O)NR<sup>d</sup>Re, (17) -NR<sup>d</sup>C(O)Re, (18) -OC(O)NR<sup>d</sup>Re, (19) -NR<sup>d</sup>C(O)ORE, (20) -NR<sup>d</sup>C(O)NR<sup>d</sup>Re, (21) -CR<sup>d</sup>(N-ORE), (22) CF<sub>3</sub>, (23) -OCF<sub>3</sub>, (24) C<sub>3-8</sub>cycloalkyl, and (25) heterocyclyl; wherein cycloalkyl and heterocyclyl are optionally substituted with one to three groups independently selected from R<sup>c</sup>;

- 25 R<sup>b</sup> is selected from (1) a group selected from R<sup>a</sup>, (2) C<sub>1-10</sub>alkyl, (3) C<sub>2-10</sub>alkenyl, (4) C<sub>2-10</sub>alkynyl, (5) aryl, and (6) -(C<sub>1-10</sub>alkyl)-aryl, wherein alkyl, alkenyl, alkynyl, and aryl are optionally substituted with one to three substituents selected from a group independently selected from R<sup>c</sup>;

R<sup>c</sup> is (1) halogen, (2) amino, (3) carboxy, (4) C<sub>1-4</sub>alkyl, (5) C<sub>1-4</sub>alkoxy, (6) aryl, (7) -(C<sub>1-4</sub>alkyl)-aryl, (8) hydroxy, (9) CF<sub>3</sub>, (10) OC(O)C<sub>1-4</sub>alkyl, (11) OC(O)NR<sup>f</sup>R<sup>g</sup>, or (12) aryloxy;

R<sup>d</sup> and R<sup>e</sup> are independently selected from hydrogen, C<sub>1-10</sub>alkyl, C<sub>2-10</sub>alkenyl, C<sub>2-10</sub>alkynyl, Cy and -(C<sub>1-10</sub>alkyl)-Cy, wherein alkyl, alkenyl, alkynyl and Cy are optionally substituted with one to four

5 substituents independently selected from R<sup>c</sup>; or

R<sup>d</sup> and R<sup>e</sup> together with the atom(s) to which they are attached form a heterocyclic ring of 4 to 7 members containing 0-2 additional heteroatoms independently selected from O, S and N-R<sup>h</sup>, and wherein said heterocyclic ring is optionally fused with a C<sub>3-8</sub> carbocyclic ring or is optionally substituted with 1 to 4 groups independently selected from C<sub>1-10</sub>alkyl;

10 R<sup>f</sup> and R<sup>g</sup> are independently selected from hydrogen, C<sub>1-10</sub>alkyl, Cy and -(C<sub>1-10</sub>alkyl)-Cy; or

R<sup>f</sup> and R<sup>g</sup> together with the carbon to which they are attached form a ring of 5 to 7 members containing 0-2 heteroatoms independently selected from oxygen, sulfur and nitrogen;

R<sup>h</sup> is selected from R<sup>f</sup> and -C(O)R<sup>f</sup>;

Cy is selected from cycloalkyl, heterocyclyl, aryl, and heteroaryl; and

15 m is 1 or 2.

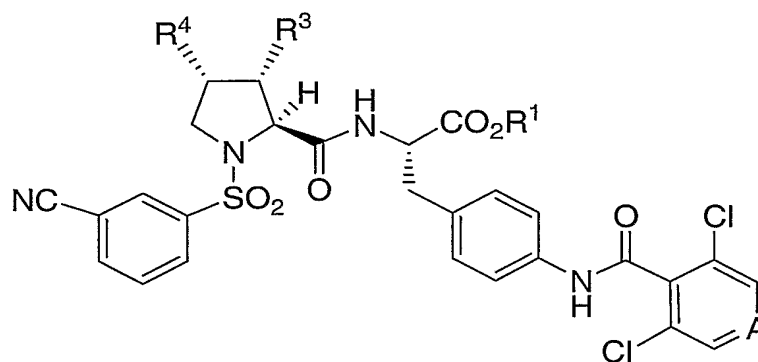
2. A compound of Claim 1 wherein one of X and Y is halogen and the other is selected from halogen, C<sub>1-3</sub>alkyl and C<sub>1-3</sub>alkoxy.

20 3. A compound of Claim 1 wherein R<sup>1</sup> is hydrogen, C<sub>1-4</sub>alkyl, -(C<sub>1-4</sub>alkyl)OC(O)-C<sub>1-4</sub>alkyl, or -(C<sub>1-4</sub>alkyl)OC(O)-C<sub>1-4</sub>alkyl.

4. A compound of Claim 1 wherein R<sup>3</sup> is hydrogen, and R<sup>4</sup> is NR<sup>d</sup>R<sup>e</sup>.

25 5. A compound of Claim 1 wherein R<sup>3</sup> is NR<sup>d</sup>R<sup>e</sup> and R<sup>4</sup> is hydrogen.

6. A compound of Claim 1 having the formula Ia:



Ia

or a pharmaceutically acceptable salt thereof, wherein

A is N or N<sup>+</sup>O<sup>-</sup>;

- 5 R<sup>1</sup> is selected from hydrogen, C<sub>1-10</sub>alkyl, -(C<sub>1-4</sub>alkyl)-aryl, -(C<sub>1-4</sub>alkyl)-O-C<sub>1-4</sub>alkyl, and -(C<sub>1-4</sub>alkyl)-OC(O)-C<sub>1-4</sub>alkyl;  
one of R<sup>3</sup> and R<sup>4</sup> is NR<sup>d</sup>R<sup>e</sup> and the other is hydrogen.

7. A compound of Claim 6 wherein R<sup>d</sup> is hydrogen and R<sup>e</sup> is t-butyl or cyclobutyl.

8. A compound of Claim 6 wherein R<sup>3</sup> is hydrogen, and R<sup>d</sup> and R<sup>e</sup> together with the nitrogen atom to which they are attached form a heterocyclic ring of 4 to 7 members containing no additional heteroatom and optionally substituted with 1 or 2 groups independently selected from C<sub>1-4</sub>alkyl

9. A pharmaceutical composition comprising a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

10. Use of a compound of Claim 1 or a pharmaceutically acceptable salt thereof for the manufacture of a medicament for the treatment or prevention of diseases mediated by cell adhesion.

11. The use of Claim 9 wherein said disease is selected from asthma, multiple sclerosis, inflammatory bowel disease, chronic obstructive pulmonary disease, sickle cell anemia, leukemia, and rheumatoid arthritis.

12. The use of Claim 9 wherein said disease is heaves in horses.